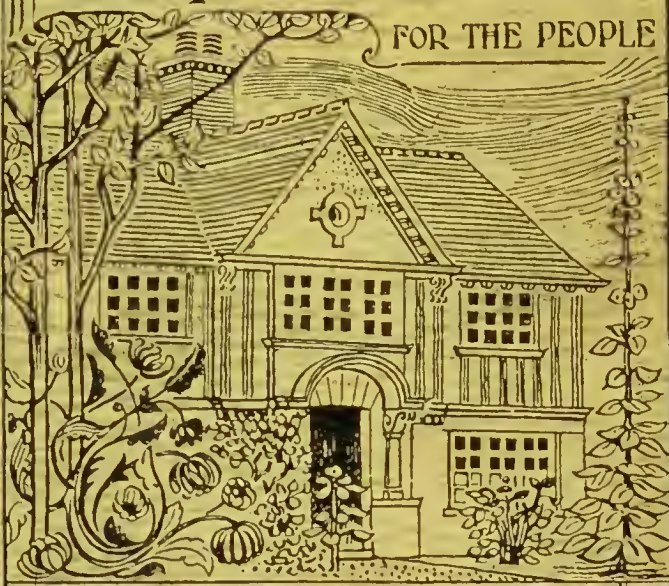


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ETC., ETC.

BY GEORGE E. CLARE, M.S.A.
WALTER G. ROSS, A.R.I.B.A. .
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[1900]

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PREFACE.

AT the present moment when the problem of housing the working classes, and in particular that section which we appropriately term the "poor," is brought under the notice of all landowners and employers of labour in the most practical of ways, and before the general public by the Daily and Scientific Press, the Authors feel that no apology can be needed for this little work.

In the exercise of their profession they have been brought daily face to face with the many difficulties the case presents. These they have earnestly endeavoured to meet in the manner most advantageous to the building owner, and the tenant ; with what measure of success they leave the reader to judge.

They, therefore, send forth this little book with confidence, believing it will commend itself to every progressive man and that it contains information of the greatest use to all those belonging to the classes named, and also to the

man of small means who is desirous of realising the luxury and comfort of living in his own house built after his own heart to meet his individual needs. His richer brother, too, who would build himself a bungalow on the seashore, river bank or hillside "far from the maddening crowd," but for the expense entailed under the usual conditions, will find much to interest him, as also will the speculative builder to whom the great reduction now possible in the cost of building will specially appeal.

G. E. CLARE.

W. G. ROSS.

CHELMSFORD AND 1, WEST STREET,

FINSBURY CIRCUS, E.C.

July, 1900.

INTRODUCTION.

THE problem of housing the working poor is supposed by many people to be confined to the towns and great centres of population.

How far this idea is removed from the truth, anyone with an intimate knowledge of almost any one village in any rural district in England must be fully aware.

Our object in putting this work into the hands of the public is not so much to bring home to the indifferent or unconcerned, the seriousness of the great evils that exist all through our rural England, but to point out to those who know but too well the symptoms of the disease, and the insurmountable difficulties met with in the endeavour to conquer them, that by means of a patent construction, recently perfected, it is possible to provide ideal homes for the working poor at rents which shall prove remunerative to the building owner, and yet not be beyond what the smallest wage owner, can, and ought to spare from his slender income for rent.

In the first place, then, we will endeavour to show what the maximum cost of houses for the different classes of workers must be, if the rents which the tenants can pay are to produce a fair per centage on the building owners' outlay.

These figures will at once demonstrate to the practical reader, that at the present prices of labour and building materials it is quite impossible for an individual to build for the working classes as a profitable investment. This class of building, therefore, is carried on by the philanthropist, or some local authority who obtain powers to borrow the necessary money, and to make up the rent roll, to the amount required to pay the interest on the borrowed money, from the rates.

This is what has taken place in so many of our large cities and towns with such satisfactory results, but in many rural districts building for the working classes is practically at a standstill; the population in the mean time goes on increasing, and with it the suffering, and too often disease and death, produced by insufficient accommodation, insanitary and dilapidated houses.

Secondly, we shall point out how the great difficulties of the case can be overcome, and explain a new mode of building known as "Clare's Patent Concrete and Fireproof Timber Construction," which we have perfected, and which

has enabled us successfully to produce buildings in some ways superior to those brick built, at a much lower cost. And from the figures we shall give it will be seen that with the aid of this new system economically planned Cottages can be built to comply with the Local Bye-Laws, and to suit the requirements of all classes of the working poor, at such a cost that the rent they ought to pay shall produce a remunerative return. And further that bungalows, small country houses, villas, farm buildings, chapels, and every kind of small building can be erected with substantially built walling at a cost of 33 per cent. cheaper than brick or stone walling.

CHAPTER I.

THE PROBLEM.

IT has scarcely been possible of late to pick up a Newspaper without coming across some record of gross overcrowding in the dwelling houses of the poor, the artizan, and even the middle class, or of the evil effects of such on the health and morals of that large section of the community.

In taking a tour round the slums of almost any town, or through most villages in this country, the one fact that is brought forcibly home to us is that in thousands upon thousands of cases the classes named have, to adopt the cry used by a well-known Daily Paper, "No room to live."

The timely crusade against this evil which has been so fearlessly entered upon by the *Daily News* has doubtless done great good in opening the eyes of many of those who are ever willing to lend a hand for the amelioration of suffering, to the distressing cases of need arising in many

districts out of the impossibility of the working poor obtaining sanitary cottage accommodation at a rent commensurate with their income. At the same time we fear they have not been able to suggest any satisfactory solution of the difficulty which can be carried out on a firm financial basis. It is true they published (vide *Daily News*, November 24th, 1899) sketch plans of a labourer's cottage which the author claimed could be built for £100. The following is the sequel: A friend of ours, a large employer of labour in East Anglia, and one who had long looked for some economical solution of the great problem, hailed with delight this statement and sketch plan, and at once sent for a builder and instructed him to let him have his tender for erecting so many cottages after the plan in question. The builder went carefully into the matter and cut everything as fine as was compatible with sound workmanship. He was very anxious to carry out the work, knowing full well that if he could do so for the £100 he could obtain any amount of work; but in spite of himself the cold, undeniable figures forced upon him the conclusion that his estimate for such a cottage must be nearer £175 than the sum claimed as possible; and this it must be borne in mind was without the cost of the land. The work, therefore, had to be abandoned.

On all hands one hears from farmers, contractors and other employers of labour of the difficulties they have to contend with in obtaining labour because of the scarcity of

cottages that are fit to live in, and anyone with an intimate knowledge of the requirements considered by the labourer as necessities of life, knows that he will live almost anywhere so long as there is any semblance of some walling and some sort of a roof; oftentimes he has to forego such luxuries as windows, and to be content with as much of heaven's light as can squeeze through one or two glass tiles on a thatched roof. In many an inhabited cottage the roof will be found so defective, that, in the miserable attic on the first floor that does duty for a bedroom, it is quite impossible on a wet night to find a space large enough for a bed that shall be free from droppings from the roof. We refrain, however, from giving our readers further details of the many cases of real suffering caused by the dilapidated condition of cottage homes that frequently come under our notice, and of the very grave danger to the life and health of the individual and the public, caused by the most elementary principles, necessary for sanitary and hygienic conditions, being totally ignored.

Should further proof be needed of the deplorable state of things that exist in Urban and Rural districts the enquirer is advised to read the report of the *Daily News* Special Commissioner in the issues of that organ of October 17th and 30th, November 1st, 6th and 14th, 1899. Our object is not to detail the symptoms of the disease but to suggest a remedy.

Well may the incredulous reader exclaim—and such things in our country, this land of Rural District Councils, Sanitary Authorities and Inspectors, and Medical Officers of Health. Yet it is perfectly true that in every town there are scores of houses, and in most villages many cottages, that are utterly unfit as dwelling places for man or beast, or much too small for the number huddled together in them.

Then, again, it is a common occurrence for a farm labourer to have to walk several miles before and after a hard day's work to his poor domicile, while his less fortunate fellow after vainly attempting to find a home "be it ever so humble" is perhaps driven to the workhouse.

It is the scarcity of good dwellings, then, that compels Sanitary Inspectors and Local Authorities to wink at many cases of insanitary cottages, as they know very well that to carry out their duties strictly, and to enforce the regulation cubic air space per person in all dwellings would necessitate turning thousands out of doors to become homeless wanderers.

The question that arises in the mind at once is :—How is it that the supply of habitable cottage homes, particularly for the poor, has not kept pace with the increased demand produced by the rapid rise in population? The answer has already been stated that under recent conditions it has been impossible for private enterprise to build the required

cottages at such a cost that the rent obtainable will prove remunerative. As to the causes which have produced this state of things we have already given as one, the high price of building materials and labour; the cost of building, speaking generally, having increased 30 per cent. in recent years. There is, however, another cause which has had a very large share in bringing about this very undesirable end, and that—in the irony of fate—is a measure brought into existence with the express object of checking the evil it has aggravated. We refer to the Bye-laws of the Local Authorities concerning the erection of new buildings. The tendency of these is to become more stringent as time goes on, but it has been apparent to many that the clauses regulating the materials for constructing walls, thickness of walls, height of rooms, and other matters of detail, are only defeating the principal objects for which they were framed, as they run up the cost very greatly and render the erection of cottages quite prohibitive.

The cost at the present time of a pair of five-roomed cottages planned with the most rigid economy, but built in brick or stone, which are practically the only materials recognised by the Bye-laws, is £300—£325, without the land.

Cost of building say	...	...	£300
„ land „	...	...	£20
Total outlay say	...		£320

Now for argument sake, suppose the labourer pays 3/- per week for each of these cottages.

Gross rent	...	...	...	£15 12 0	per ann.
Deduct for repairs, contin-					
gencies and rates, say	...			3 0 0	
Net rent, say	..			£12 12 0	per ann.

Which sum is a return of less than 4 per cent. per annum on the original outlay of £320 and, as every business man knows, is not a fair return for this class of property.

At the same time a rent of 3/- per week is quite out of the question for the majority of agricultural labourers, unless they have grown-up sons at home to contribute to the maintenance of the house, or lodgers are taken. Generally speaking, where good cottages of the cheapest type are erected in country districts, the rents are beyond the pocket of the farm labourer, and are occupied by signalmen, platelayers, or often by small London tradesmen who have retired into the country to live in a humble way in a cottage and keep a few fowls, bees, or a cow.

Cases are known to us where the cheapest six-roomed cottages in small towns are being let at from 8/- to 10/- per week, and tenants clamouring to get them even at this price. To meet such a rent, lodgers have to be taken, and overcrowding at once ensues.

The poor agriculturist is either compelled to remain in his wretched hovel and be content "to grin and bear it," or migrate to the towns where he has visions of a wage of £2 per week. A few weeks of city life suffice to disillusionize him, as he finds the increased rent and cost of living generally reduce his net income to about what it was in the country, with the many disadvantages of town life as compared with that in the country.

It is usually stated that a fair proportion of income to be devoted to rent is one-sixth, but this only applies to middle class incomes. The lower we go in the social scale the less ought a man to pay for rent in proportion to his income, and for the class we are considering we must not place the proportion higher than one-tenth.

The following table is worked upon this basis, and gives approximately the amount of rent that ought to be paid by various working classes in country districts:—

		Wages per week.		Rent per annum.	
		£	s. d.	£	s. d.
1.	Ordinary farm labourers earning on an average wage over the whole year, including harvest, &c.	0	18 0	4	10 0
2.	Foremen, team men, shepherds and mechanical labourers - - -	1	1 0	5	5 0

		Wages per week	Rent per annum.
3.	Signalmen, railway porters, various mechanics, clerks, maltsters, brewers' draymen, &c. - - -	£1 10 0 to 2 0 0	£7 10 0 to 10 0 0
4.	Small tradesmen and farmers - -	3 0 0 to 4 0 0	17 0 0 to 26 0 0

The necessary accommodation for these classes would be:—

CLASSES 1 AND 2. A living room about 130 feet super.; a sitting room about 120 feet super.; a small wash-house, larder, and earth or water closet; two bedrooms about 120 feet super.; small bedroom about 60 feet super.

CLASS 3. A living room about 140 feet super.; a sitting room about 130 feet super.; a small combined scullery and kitchen, larder; coal-house and w.c.; three bedrooms about 120 feet super.; a small bedroom or bathroom.

CLASS 4. A living room about 160 feet super.; a parlour about 160 feet super.; small hall; kitchen about 100 feet super.; small scullery, larder; w.c., coals; three or four bedrooms about 125 feet super.; bathroom. If it be a small farm a dairy must be added.

To give a minimum return of 5% on the gross outlay, after allowing for rates and repairs, the cost of these cottages including land would have to be reduced to amounts shown in the following table—

CLASS 1.	Rent	-	-	-	-	-	-	-	£4	10	0
	Deduct Rates say	0	10	0							
	10% for Repairs -	0	9	0							
										0	19 0
	Net return								£3	11	0

Which is 5 per cent. on £71.

CLASS 2.	Rent	-	-	-	-	-	-	-	£5	5	0
	Deduct Rates say	0	13	0							
	10% for Repairs -	0	10	6							
										1	3 6
	Net return								£4	1	6

Which is 5 per cent. on £81 10s.

CLASS 3.	Rent	-	£7	10	to	£10	say	£8	15	0
	Deduct Rates say		1	1	0					
	10% for Repairs -		0	17	6					
									1	18 6
	Net return		£6	16	6					

Which is 5 per cent. on £136 10s.

CLASS 4. Rent - - £17 to £26 say £22 0 0

In this class the tenant would

pay the Rates - - - - -

Deduct for Repairs 10% - - 2 4 0

Net return £19 16 0

Which is 5 per cent. on £396.

Now it will be evident to anyone who has tried the experiment that it is utterly impossible to build any sort of cottage to give the accommodation named, such as are shown in Plates Nos. 2, 3, 4, including the land for anything like the figures named in Classes 1 and 2, but in Classes 3 and 4 it is possible if strict economy is maintained, and the houses are built in pairs or terraces of three or four to give the required accommodation such as in Designs Nos. 1, 5, 6, 7 and 8 for the expenditure named.

From these figures it must be evident that unless philanthropic capitalists, or farmers, who are anxious to house and retain their best labourers can be found content with a return of $2\frac{1}{2}$ per cent. on their outlay, the labouring classes in rural districts must remain as they are in their insanitary and inadequate dwellings.

We have found from practical experience that the lowest cost of cottages in brickwork, arranged in terraces or pairs, such as Nos. 3 and 8, is about £150. We have erected

several in timber, with brick or concrete party walls and chimneys, for as little as £250 the pair; such erections as these are unfortunately out of the question in most rural districts on account of the Bye-laws prohibiting anything of a combustible nature, these restrictions as far as they affect the question of fire are reasonable, except in detached cottages sufficiently isolated.

But the advantages of the Bye-laws as they affect the materials for construction certainly end here, as in practice it is found that properly constructed timber houses covered on the outside with plastering or tile hanging, and plastered on the inside, are far more weather-proof than those built with 9-inch brick walls, and have the additional advantage of being cooler in summer and warmer in winter than brickwork.

If the walls be built of two $4\frac{1}{2}$ -inch walls, separated by a 2-inch cavity, bonded together with iron ties, they are much drier than an ordinary 9-inch wall, and this method, therefore, is much in vogue, although considered by some to be flimsy, it is, however, quite strong enough for cottages and small buildings where the walls are not very high or of great length. It has the disadvantage of adding somewhat to the expense as against a 9-inch solid wall. To render a house absolutely proof against damp, and at the same time thoroughly substantial, there is nothing better than building

up two $4\frac{1}{2}$ -inch walls with a half-inch cavity between them, and then filling in with molten rock asphalte composition, which when set, binds the two thin walls together and renders them impervious to damp, and so strengthens the wall, that although only $9\frac{1}{2}$ -inch thick it is as strong as an ordinary 18-inch wall. Plate No. 14 shows a house that was carried out in this way but proved to be rather expensive.

CHAPTER II

THE REMEDY.

THERE is an old north-country saying that "A man's character takes after the state of his house," how far this is true we will not discuss here. It may, however, be safely stated that all social reform must begin with the home.

As far as the home of the City dweller is concerned we do not profess to offer any suggestion, but for a large proportion of city workers it is not absolutely necessary that they should live close to their work. It may be taken that of the workers in cities and large towns it is only necessary for about one-fifth of the total number to live in close proximity to their work. For the remaining four-fifths then the problem resolves itself into one of inducing large numbers of toilers, now crowded together in the lowest and most insanitary parts of our large towns, to move out to a suburban district where it is possible to provide good accommodation at a reasonable rent.

A very important factor in bringing this about is that cheap and rapid transit must be provided by the railways to such suburban districts, and at times convenient to the workers.

There are large tracts of vacant and available land around the Metropolis which might be acquired under Part III. of the Housing of the Working Classes Act, and powers to acquire land outside the County of London are now being sought by the London County Council.

Much has been done of late in providing workmen's trains at convenient times and low fares by some of the Railway Companies, especially the Great Eastern Railway, with the result that a large working population has been attracted to the district which it serves. The low tramway and 'bus fares have also proved a great boon to many toilers. Much, however, remains to be done, it being necessary that the country rent plus the railway fare should not be more than the town rent.

The Authors have long recognised the fact that if a method of building substantially could be devised that should meet the requirements of the Local Authorities and yet should enable cottages to be put up at about the cost of building before the rise in materials and labour during recent years, the problem of housing the working poor would, to a very large extent, be solved.

This we claim has been done by Clare's Patent Concrete and Fireproof Timber Construction, which we will now proceed to explain. It is not claimed that there is anything new in ordinary timber and concrete construction, but this will not satisfy the Local Authorities.

A skeleton framework of fireproof timber is set up and the interstices are filled with coke breeze or other concrete. The timber is rendered fireproof by the London Non-flammable Wood Co., Ltd., of Regent House, Regent Street, W., or by treatment with fireproof solutions.

The former system of fireproofing timber has been tested by the British Fire Prevention Committee, in respect to sustaining or spreading flame when in contact with fire at temperatures ranging as high as 1,300 degrees Fahrenheit, and the summary of the report says:—"No incandescence or spread of flame was observed, nor did the material, as far as could be seen, contribute in any way to the spread of the flame; the surface of the boards were charred." It may therefore be considered quite satisfactory as a fire-resisting material.

This construction complies with the requirements of the Local Bye-laws, and not the slightest difficulty has been experienced in getting the sanction of the Committees before whom it was brought; their surveyors recommending

it to be sound construction and conscientiously carrying out the letter and spirit of their Bye-laws.

The walls thus formed are even more rigid and substantial than 9-inch brick walling, and if rendered outside with cement rendering or tile hanging are much more proof against damp. The question of economy is also met as the cost is not more than two-thirds that of 9-inch brickwork, or a reduction of $33\frac{1}{2}$ per cent.

Now it has already been stated that during recent years the cost of building has advanced 30 per cent, therefore, with our patent construction we can erect the carcase of a building at the cost usual for any given accommodation before the recent rise in materials and labour.

Other advantages claimed for it and fully borne out by experience are:—

- 1.—It can be carried out by unskilled workmen.
- 2.—Buildings can be erected with much greater speed than in brickwork.
- 3.—Houses may be safely inhabited sooner than those brick built.
- 4.—It gives permanent buildings at about the cost of temporary.

These points are all important factors in the question, particularly the labour question, as it becomes more difficult every year to obtain skilled mechanics in rural districts, the joinery and other finishings can all be prepared in town by machinery and only need fixing on the building.

In comparing the relative cost of buildings erected in this patent construction with those of brick, the following points in favour of the former must be borne in mind :—

No openings to form as in brickwork.

No reveals to form as in brickwork.

No outside arches as in brickwork.

No centreing for arches required.

No inside relieving arches or lintels.

No wood bricks, plugs, fixing fillets or battening.

No grounds for architraves, skirtings, etc., required.

No cutting to gables or any raking surface.

No cutting or forming chases for wires, pipes, etc., as by building in fillets and removing when concrete is set the chase is formed.

No scaffolding in the case of small or low buildings which are formed on the ground and then hoisted into position, and there is also a great saving and simplification in the case of walls which have to be built in position.

As to the concrete a variety of materials can be used with the Portland cement, which enables the work to be carried out almost anywhere with local materials, thus obviating the cost of carriage. The work, too, can be carried out in remote districts where it is quite impossible to obtain bricks at a reasonable cost or skilled labour.

The following are some of the materials which may be used with Portland cement to make good concrete suitable for use with our patent construction :—

- 1.—Washed cinder from factories, breweries, etc., and road sand.
- 2.—Pit gravel and sand.
- 3.—Washed beach shingle and sand.
- 4.—Coke breeze and sand.
- 5.—Clinkers broken small and sand.
- 6.—Agricultural “picked stones” broken small and sand.
- 7.—Granite or granite chips and sand.
- 8.—Broken bricks, lime core and blue lias lime.

In fact, anything of an incombustible nature can be used for the concrete, including burnt earth which can be made at about 2/- per ton anywhere where the soil is of a clayey nature.

On the exterior the walls can be finished to suit any taste with rough cast or cement rendering, sham half timbering, hanging tiles, slates or oak shingles; anything, in fact, can be nailed to the walls when coke breeze concrete is used.

In considering further the question of economy we must take into account the planning of the cottages, the roof covering and other details connected with joinery and finishings. It must be remembered, too, that given a superficial area the square block covering this will cost considerably less to build than an oblong block. Thus a block 20 feet square or 400 feet super. by 10 feet high gives an area of walling equal to 800 feet super., but a block 40 feet by 10 feet, or 400 feet super. and 10 feet high, gives an area of walling equal to 1000 feet super. or 200 feet more than the square block. Therefore it follows that the nearer on plan to the square the house or cottage can be kept, the more economical it will be. Also, a rectangular block will always be cheaper than one broken up with projections necessitating gables and complications in the roof.

With regard to roof coverings it is not always economy to use the cheapest material, as this often results in constant expense for repairs to the roof and of damage done internally by the damp.

It is doubtful if anything can be found more durable and efficient for the roof than Broseley or some of the local

hand-made tiles with holes and nibs, the only drawbacks to these being their cost and the expense of laying them. The weight of the tiles, too, necessitates very heavy roof timbers, the pitch of a roof so covered ought never to be less than 40 degrees. It is therefore clear that this roof covering, although one of the best, is by no means economical.

We have found by practical experience that the tiles made by Messrs. H. J. Major & Co., of Bridgewater, are a very satisfactory roof covering, especially the "Double Roman Interlocking Pattern" which cost less than the cheapest slates, are very durable, weather tight, and suitable to an ordinary slate pitch of 30 degrees. They are at the same time neat in appearance, quickly laid and light, therefore not requiring heavy roof timbers; very large size. therefore not requiring so many battens on any given area and require no nailing or bedding.

When slates are used we prefer Westmoreland green slates with plain slate ridges and hips, the colour of these combines well with red brick or rough cast. The disadvantage of any kind of slate is that it is a good conductor of heat, and, therefore, rooms in a slated roof are hot in summer and cold in winter to a greater degree than those in a tile roof.

Our remedy, then, is such that it is not needful to wait for slow moving public bodies or fresh legislation to over-

come many of the evils at present rampant. We claim that it enables the landowner and employer of labour to build homes for the working classes in rural districts and let them at a rent that shall give a fair return on the outlay. And, further, its effects should be felt by that large proportion of the city and town workers who need not live in close proximity to their work, but who would be glad to live in a suburban district if only they could obtain the necessary accommodation at a low enough rent. With its help the speculator can now bring his powers to bear in competition with the slum owner, and also the London County Council and other public bodies who have in the past held the monopoly of building cottage homes, etc., for the working poor on the outskirts of London and other large towns.

The whole bearing of our patent on the Housing Question is one of economy in construction, it being much cheaper than brickwork or any other form of construction which would receive the sanction of the Local Authorities. At the same time it is fire resisting, a bad conductor of heat, it weathers splendidly and forms an exceedingly dry wall.

CHAPTER III.

BUNGALOWS AND SMALL GOOD CLASS HOUSES.

NOW for a word as to bungalows and small but good class houses for gentlemen. What is a bungalow? Most people's minds, at the sound of the word at once fly to India, and a picture is formed in which a squat building with only a ground floor and covering a large area, with sun shutters and wide projecting eaves, verandah and low pitched roof, forms the centre, a bungalow.

This indeed may be an Indian bungalow, but such would be altogether unsuited to the climate of this country. It has been well said "a cottage is a little house in the country, but a bungalow is a little country house," and this is the sense in which we use the word. It may vary in size from a mere summer cottage to a comfortable conveniently planned and self-contained but economical country house.

And what more necessary or delightful for the jaded city man, or the habitually overworked professional man, than to have a quite retreat in the country, or on the sea shore, to which to escape from the turmoil and worry of business for week-ends, there to gather fresh energies for the arduous and exacting work of the coming week.

A country bungalow is indeed a blessing, and only one who has enjoyed the freedom and luxury of week-ends spent with one or two friends far from the conventionalities of town life, and surrounded by nature, can have any idea how much enjoyment can be got out of one. How different both as to cost and enjoyment a few days spent thus to a similar period in a crowded hotel, noisy and expensive, with all the discomforts inseparable from hotel life.

Our patent construction is applicable to this form of building, as to cottages, and many of the remarks already made apply equally to cottages, villas, bungalows, or small country houses of a good class, as do also those that follow. A bungalow should be a pretty, compact little place with a sheltered verandah, externally harmonizing with the surroundings, and, if possible, built of local materials. Internally it must be carefully planned, both for the sake of economy and comfort, and finished in the lightest and most cheerful manner.

For economical reasons there must be no waste spaces, and as the difficulty in avoiding this always occurs in connection with the hall, stairs and passages, it will be evident that the position of the staircase in a house is of the first importance. In many a house the waste passages, landings, etc., put together would make an additional room, and thus serve a useful purpose, instead of being "cool chambers," making the rooms draughty, generally lowering the temperature of the house, causing great discomfort to the inhabitants, and considerably increasing the amount of coal consumed in an effort (how often unavailing) to warm the house.

On entering a house first impressions are taken from the hall, which should, therefore, receive most careful consideration. The possession of a hall, as opposed to a passage, gives a certain amount of character to a house, and therefore should never be omitted, even if it has by force of circumstances to be very small. If one of the fireplaces be arranged to back on to the hall, and be fitted with a Shorland Patent Stove in which warm fresh air is conveyed from the back of the grate to the hall, the warming of the rooms is greatly facilitated, and the consumption of coal in the house generally is reduced. The staircase should be arranged in an arched recess leading out of this hall, and then, if simply treated as becomes the class of house should

not fail to form a most pleasing feature even in the smallest house.

The external appearance of cottages and small houses is not sufficiently taken into account. There is no reason why the smallest cottage, or the simplest bungalow, or country house, or even the semi-detached villas should not be as artistic in design as the Manor house or the Vicarage. Some will tell us that this is nonsense, but we hold that true beauty in buildings is not proportionate to their cost but depends on the degree in which they harmonize with their surroundings, they express their use, and their sound construction is evident. It also depends on the proportion of their various parts to each other, and the skill of the designer in combining the various materials so as to produce an harmonious scheme of colour.

In how many buildings of this class are these points given consideration? Very few, indeed of the total number built, but we are happy in believing the number is increasing every year. There is no doubt that many men in all stations of life can appreciate and aspire to possess a well-built, sanitary and pretty home, of a size according to their means, to which they may retire after the labours of the day. Or it may be a snug little bungalow on the sheltered hillside, or by the silver sea, where he may exchange the sulphurous atmosphere of a large town for the bracing air of

our East Coast, or the dingy fog of London for the sunshine of the Surrey hills or the South Coast.

If it be a small country house designed for a permanent residence, the strongest feeling emanating from the place must be one of "home." The house must be entirely self-contained however small it be, every convenience must be provided that is necessary for comfort and sanitary requirements. The difficulty with servants, so great at the present time, must be duly taken into account, and at every point in the plan the question of saving labour must be considered. The exterior must be simple, unobtrusive and artistic, and therefore attractive. It is one of the commonest mistakes to suppose that artistic design and extravagance go hand in hand. The reverse is too often the case. Who has not seen a charming landscape ruined by a building of hideous outline, constructed of indifferent materials, and with miserable workmanship, but gorgeously decorated with misapplied and entirely inappropriate ornament in the form of various coloured plain and moulded bricks, artificial stonework, fancy roof tiling, fantastic ridges and finials, or some other of the many tricks of the "jerry builder."

In the suburban villa, too, how much money is thrown away by the speculative builder in vulgar or meaningless ornament, the only use of which is to proclaim to the artistic mind how utterly incapable of producing anything

truthful or beautiful the designer was. This type of villa is now, alas, intruding far into the country, thereby for ever ruining the quite restful charm of many of England's villages.

To obtain pleasing elevations for our country houses on the lines here laid down, one must rely on the judicious combination of simple building materials, beautiful proportions, and good workmanship in every detail, more than upon applied ornament, which it is generally impossible to get well executed, and which gives no pleasure to the beholder or dignity to the house in any way commensurate with its cost. Good, well burnt red bricks, cream coloured, rough cast, green slates, red or brindled tiles, with the various shades of green or white paint for the woodwork, generally give all the variety that is needed to produce the quiet, unobtrusive charm so generally met with in old country houses. Houses built thus rapidly weather down to complete unison with their surroundings, and year by year, as the mellowing hand of time takes a firmer hold on the fabric, its charms increase till it becomes an integral part of the landscape, to which it adds a touch of human interest.

We feel sure that if the above mode is relied upon for the necessary attractiveness of appearance it will give greater satisfaction in every way, particularly on the score of expense, as all this can be obtained without making any unnecessary call upon the pocket of the building owner.

In connection with finishing the house inside, one of the most important items is the plastering on the walls and ceilings. For this purpose ordinary plaster is doubtless the most satisfactory thing if applied and finished in a workman-like manner. Anyone, however, with any experience of building during the last year or so knows that great difficulties have arisen in (1) obtaining plasterers (2) getting them to work steadily (3) getting the work done well, and (4) through their independence and tyrannical methods generally, fostered by trade unionism. In many cases works have been at a standstill for months on account of the absolute impossibility of obtaining plasterers on any terms.

To obviate this great nuisance many devices have been adopted, such as fibrous plaster slabs which are screwed up in position, and "Compo Board," which is coming into very common use on account of the ease with which it can be fixed by unskilled labour, and the absence of all dampness, enabling a house to be inhabited the day after the walls are finished. The cost is about the same as good plastering. The instructions given by the makers for fixing must be carefully adhered to or it will not be satisfactory. It is made of compressed wood and papier-maché, and is sound and damp-proof. The surface can be painted, papered, or distempered just as plaster. Wherever rapid building has been necessary "Compo Board" has proved an invaluable material for walls and ceilings.

THE PLATES.

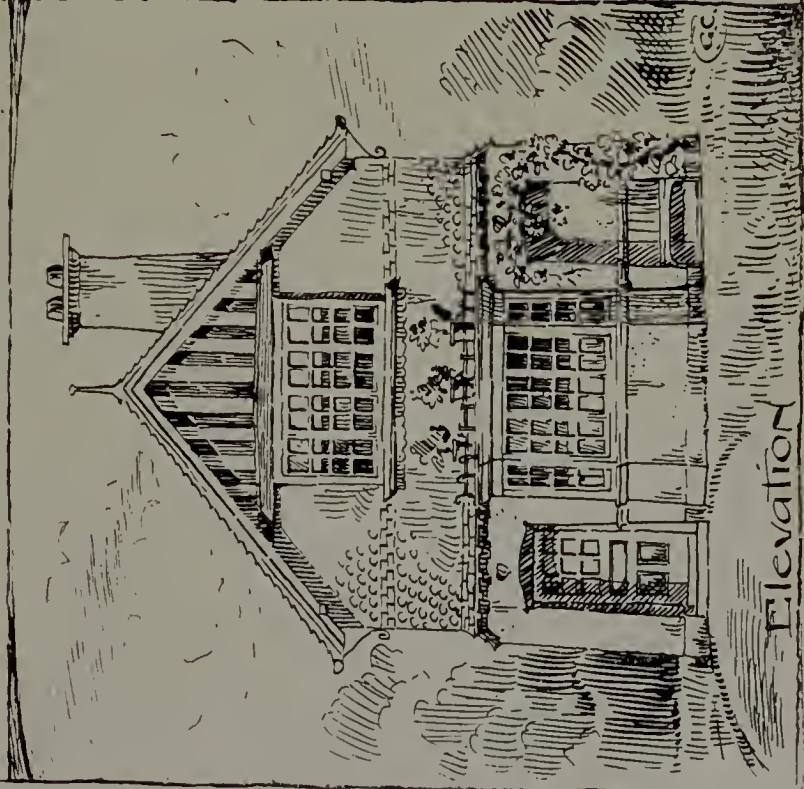
WE now give 25 plates showing plans and sketches of Cottages, Bungalows and small Country Houses, Farm Buildings, etc., suitable for erection in Clare's patent form of construction. The designs need no further description than that given on the plates. The sizes of rooms are all figured or scales given. All these buildings have been planned with a view to strict economy enabling us to give the maximum accommodation at a minimum of cost.

The Authors would be pleased to correspond with anyone thinking of building, and give every information in respect to the use of their patent and building generally.



SMALL 2 STOREY COTTAGE

as constructed in Essex Villages. Cost in patent construction about £180.



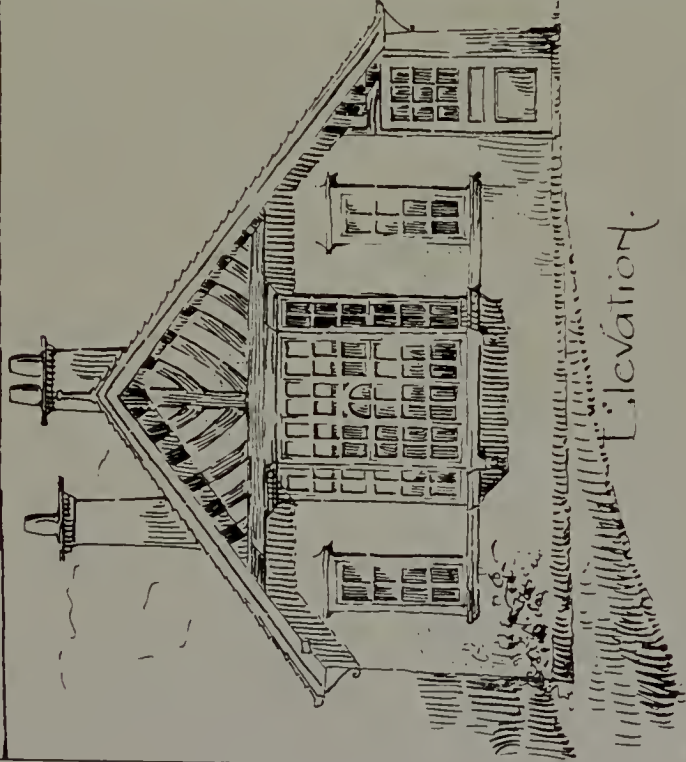
EG detached



SMALL STOREY COTTAGE

N^o 2

cost as above about £160.



Elevation.

E.C. detached.



GROUND PLAN.

Clare & Ross
ARCHT.

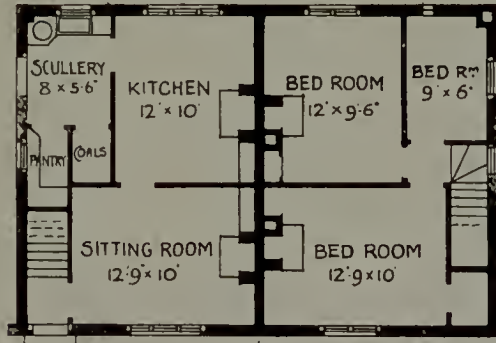
Architects & Surveyors
Chelmsford & 1 West St.
London E.C.

PERSPECTIVE SKETCH.



COTTAGES ERECTED AT GREAT LEIGHS
& OTHER PARTS OF ESSEX.

N^o 3



GROUND PLAN

FIRST FLOOR PLAN

Clare & Ross
ARCHT

PARTICULARS

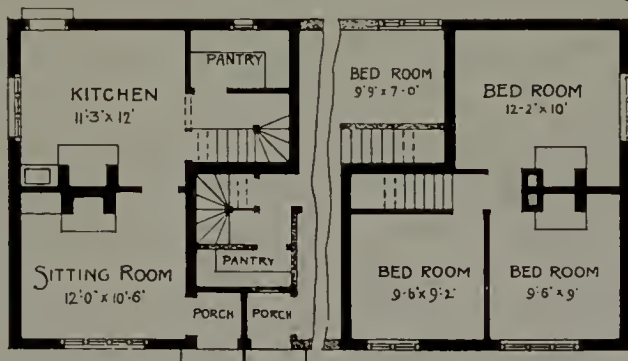
ROOMS 8 FT. HIGH - WALLS INSIDE DISTEMPERED
THROUGHOUT.
COST OF PAIR CARRIED OUT IN BRICK AS SHOWN - £315
IN PATENT CONCRETE CONSTRUCTION - 265

ARCHITECTS & SURVEYORS
CHELMSFORD
1 WEST STREET
LONDON E.C.



COTTAGES ERECTED IN ESSEX.

No 4



PARTICULARS / COST IN BRICKWORK HOLLOW WALLS BELOW
 & 9' SOLID ABOVE & ROUGH CAST FINISHED COMPLETE. £350
 COST IN PATENT CONSTRUCTION. £290

Charles Rose
 ARCHT.
 Architects & Surveyors
 CHELMSFORD.
 11 WEST STREET.
 LONDON E.C.

PERSPECTIVE
SKETCH



TERRACE OF 4 COTTAGES
FOR SPRINGFIELD, ESSEX.

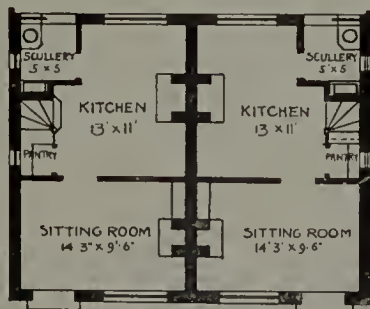
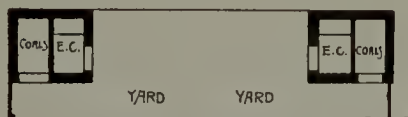
FLINT FACINGS.
RED-BRICK DRESSINGS.
MAJORS TILE ROOF.

COST ABOUT £700

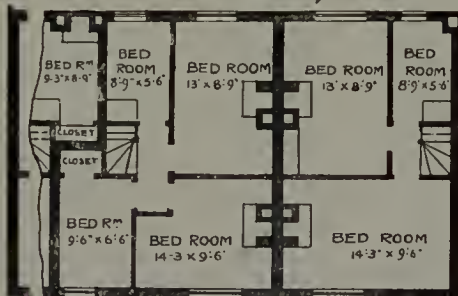
IN CONCRETE.
CONSTRUCTION ABOUT
£640

N^o 5

Claydon & Sons
Architects & Surveyors
CHELMSFORD
81 West Street
LONDON E.C.

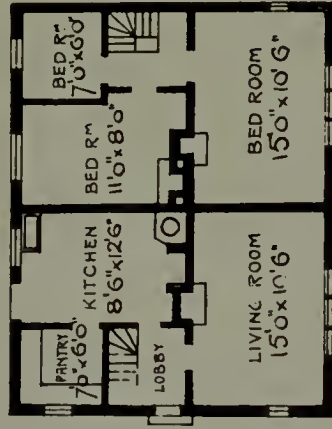
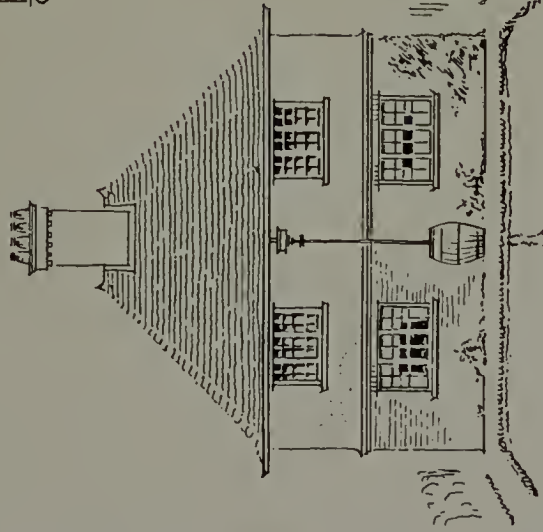


GROUND PLAN.



FIRST FLOOR PLAN.

N^o 6

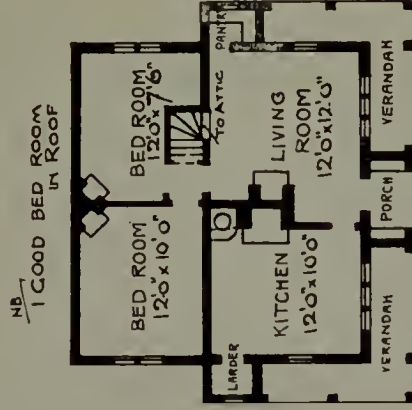
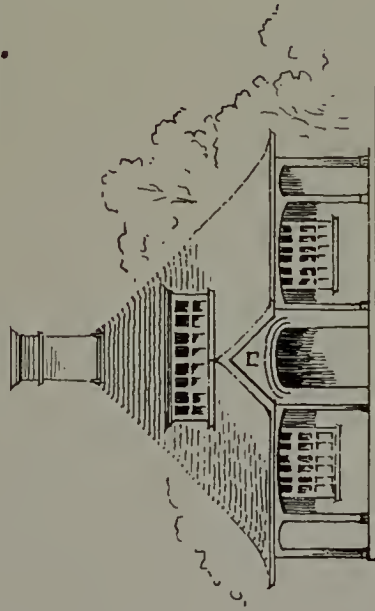


GROUND
PLAN

FIRST FLOOR
PLAN

Cheap pair of Country Cottages.
 Cost in patent Concrete Construction
 about £ 260

N^o 7



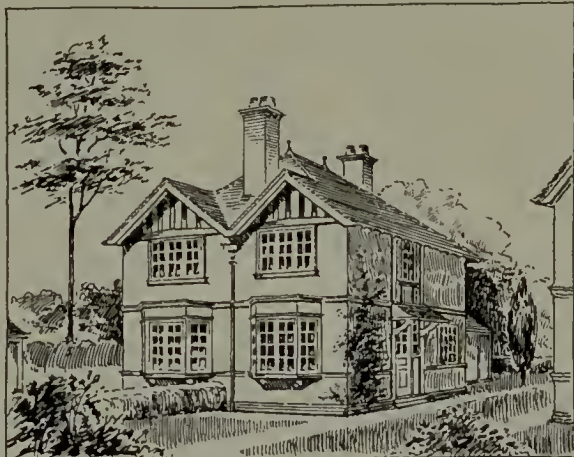
Bungalow · Cott.
with 5 rooms · Cost · 12 · concrete.
· about · £ 150.

GROUND · PLAN ·

COTTAGES.
ERECTED AT
KELVEDON

SIMILAR DESIGNS
CARRIED OUT AT
LOUGHTON
WRITTLE
& OTHER PARTS OF
ESSEX

&
SOUTH AFRICA.



N^o 8

PARTICULARS

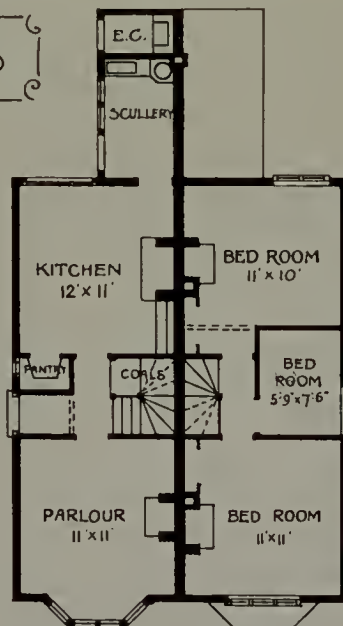
HEIGHT OF ROOMS.
8'-0" GROUND FLOOR.
8'-6" FIRST FLOOR.

WALLS BUILT OF
TIMBER & CONCRETE
ROOF TILED.

COST £ 318. COMPLETE.
READY FOR OCCUPATION.

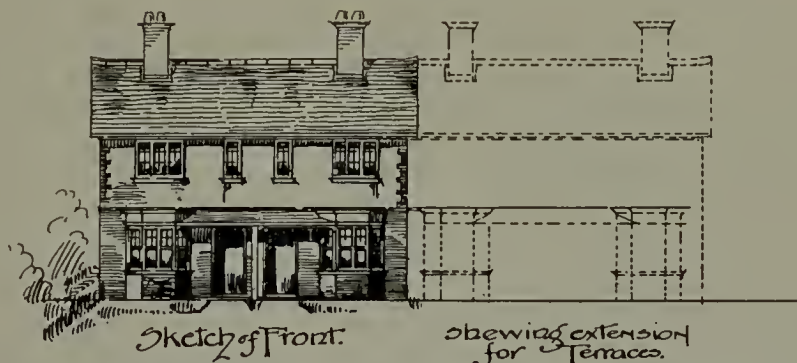
Clare & Rose
Architects & Surveyors

CHELMSFORD.
& 1. WEST STREET.
LONDON. E.C.



GROUND FLOOR
PLAN

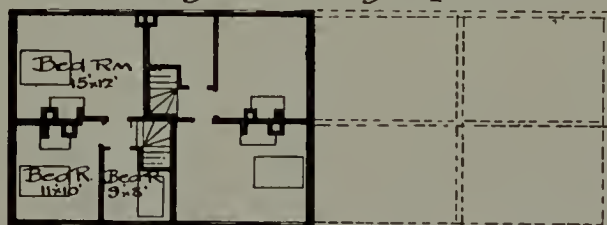
FIRST FLOOR
PLAN



Semi-detached Cottages Erected at Writtle Essex same design suitable for Terraces.

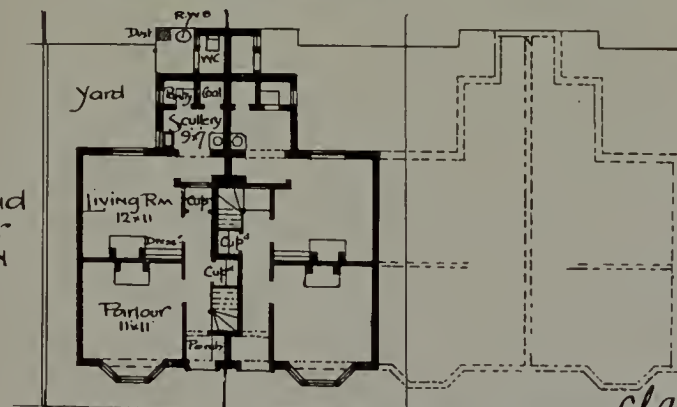
No 9

First Floor Plan



dotted lines show extension of Plans.

Ground Floor Plan



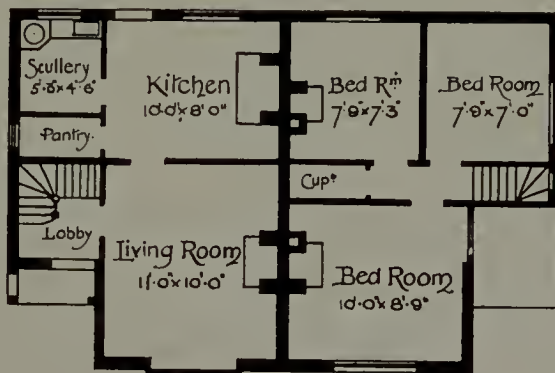
Cost as shown in brickwork £375 per pair
 " " in patent construction £325 . .

Clare Rose
 ARIBA
 Architects at
 Cheshamford or
 1 West St. Finsbury E.C.



PAIR OF COUNTRY COTTAGES

No 10



Ground Plan

First Floor Plan

Cost: in Concrete construction with plaster below

& tile hanging above about £400

Clare & Ross
Architects & Surveyors
CHELMSFORD
81 West Street, LONDON E.C.

SMALL COUNTRY OR. SEASIDE BUNGALOW.

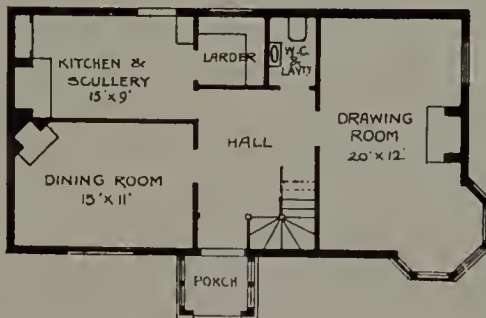
No 11



FIRST
FLOOR
PLAN



GROUND
FLOOR
PLAN



PARTICULARS -

WALLS CONSTRUCTED
OF PATENT CONCRETE
CONSTRUCTION.
RENDERED OUTSIDE
WITH CEMENT
ROOFS TILED.

COST ABOUT
£600

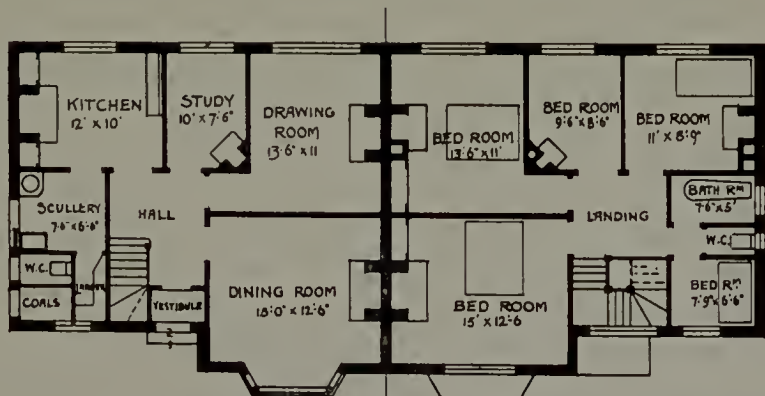
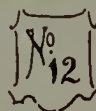
Clark & Rosa
ARCHT.

Architects & Surveyors
CHELMSFORD 55
1 WEST ST. E.C.

Perspective
Sketch.

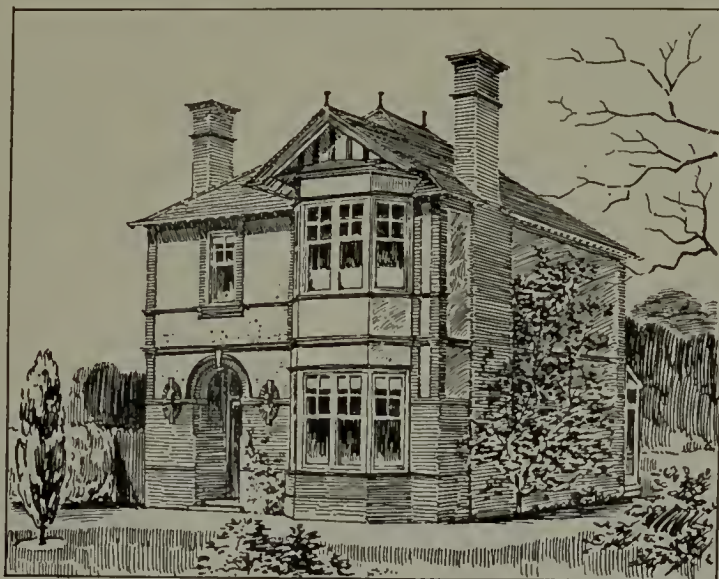


PAIR OF SEMI-DETACHED VILLAS.
· designed for · HAROLD WOOD · ESSEX ·



Cost in Patent Concrete Construction.
Roof covered with Plain Tiles about £1100.

Claret Ross
ARCHT.
Architects & Surveyors
CHELMSFORD 1 WEST ST.
FINSBURY CIRCUS E.C.

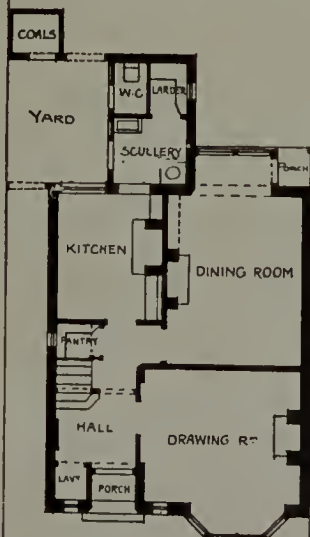


DETACHED HOUSE ERECTED AT
CHELMSFORD.

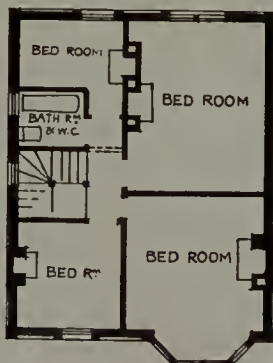
N^o
13

Could also be erected
in pairs.

Scale of Feet



GROUND PLAN



FIRST FLOOR PLAN

Cost: finished
complete in
brickwork &
plaster £520
in patent concrete
construction
about £450

Clare Ross
ARCHT.
Architects & Surveyors
CHELMSFORD
81 WEST STREET
LONDON E.C.

DETACHED
COTTAGE
RESIDENCE
ERECTED
NEAR
CHELMSFORD

No
14

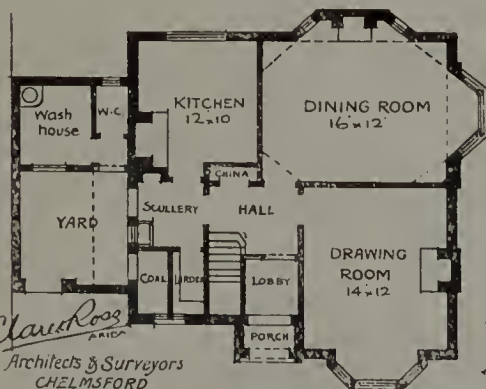


PARTICULARS / Constructed with
· 9½-brickwork having ½-cavity
· filled in with Rock Asphalt
· Green slate roof Cost £590

· In Concrete Construction Cost about £500



ATTIC PLAN



GROUND PLAN



FIRST FLOOR PLAN

Charles Ross
Architects & Surveyors
CHELMSFORD
8 & 1 West Street
LONDON E.C.

Perspective
Sketch



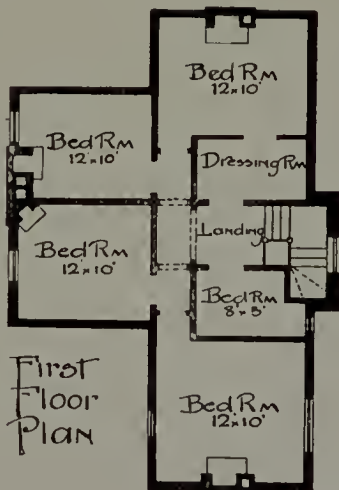
No.
15

SMALL HOUSE ERECTED AT CLEIGMS.

Cost as shewn £ 600.

ESSEX.

in patent Const: £ 525.



Charles Ross
Architect & Surveyor
Chelmsford, 6-1 West St.
Tinsbury Circus E.C.



PERSPECTIVE SKETCH

No 16



SMALL COUNTRY RESIDENCE BILLERICAY

Walls in Patent construction - Roof covered with local plain tiles.

Cost about £ 650-0-0

ESSEX

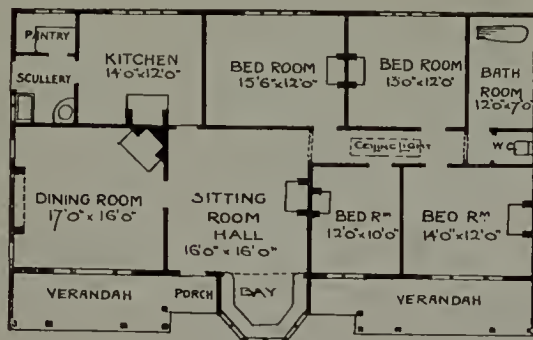
Claremont Rogers
Architects.
Chelmsford & London

Scale of Feet
0 5 10 15 20 25 30 35 40



A. RIVERSIDE BUNGALOW.

No 17



PARTICULARS

PLAN

- CONSTRUCTED WITH PATENT CONCRETE.
- CONSTRUCTION OF CEMENT RENDERED OUTSIDE.
- WOOD BLOCK FLOORS OF TILE ROOF.

COST ABOUT £650.

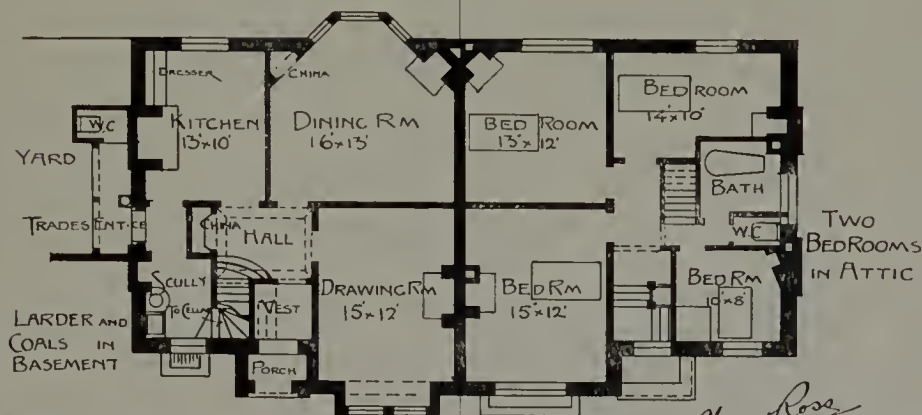
Clare Rose
ARCHT

Architects & Surveyors
CHELMSFORD
31 West Street
LONDON E.C.



SEMI-DETACHED VILLAS ERECTED IN ESSEX

No
18



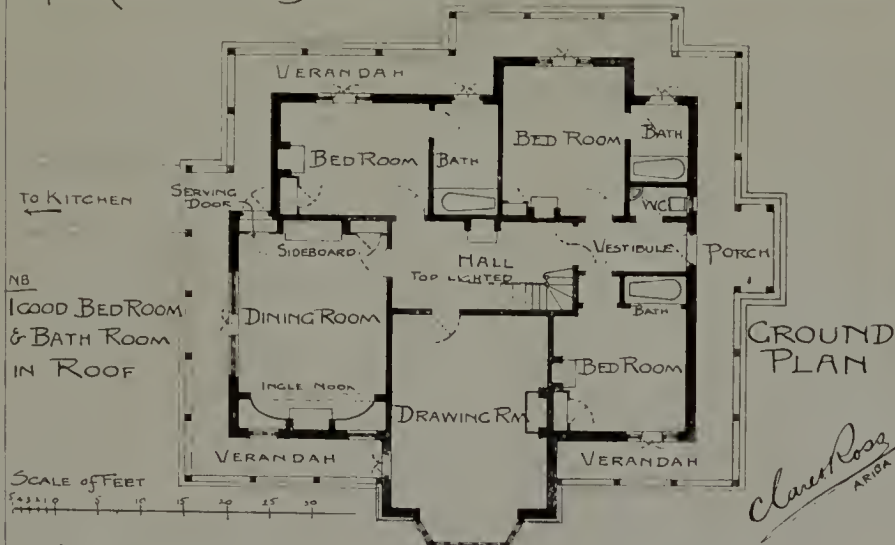
GROUND PLAN. 1ST FLOOR PLAN.

COST AS SHOWN ABOUT £1500.

Clare Rose
ARCHT
Architects & Surveyors
Chelmsford and
1 West 5th E.C.



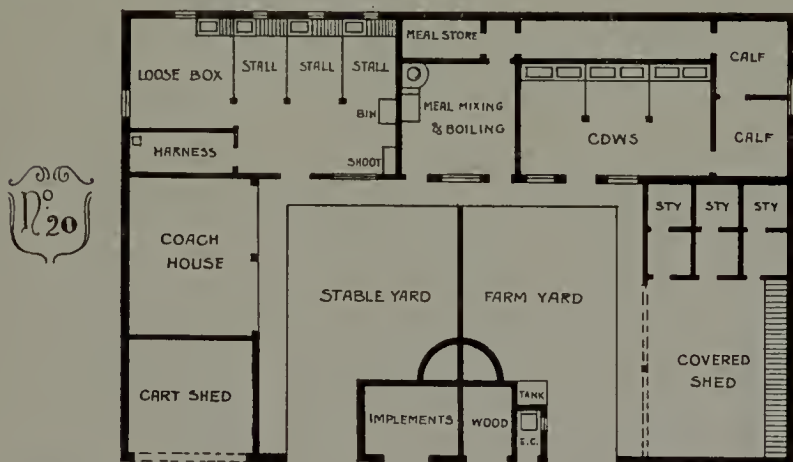
PERSPECTIVE SKETCH



A BUNGALOW IN NORTHERN INDIA
 Cost 12 patent Construction £750.0.0.



DESIGN · FOR · SMALL · FARM · PREMISES



PARTICULARS ·

GROUND PLAN

CONSTRUCTED · OF · PATENT · CONCRETE
 WALLS · ABOUT · 5" THICK · FINISHED · OUTSIDE · WITH · CEMENT
 · RENDERING · OR · CONCRETE · LEFT · EXPOSED · & · FLOATED · OFF ·
 SMOOTH

Clare. Ross
 ARCHT.
 Architects & Surveyors
 CHELMSFORD
 & 1 WEST STREET
 LONDON E.C.



SMALL MISSION HALL

· IN · SUFFOLK ·

TO SEAT 100 ·

Constructed · in · patent ·
Concrete · construction ·
wood · block · floor ·
lined · with · match · boarding ·
covered · with · fireproof · stain ·
Major's · tile · roof · plastered ·
ceiling · COST · ABOUT · £200 ·

Clare & Ross
ARIBA

Architects & Surveyors
CHELMSFORD
81 West Street
LONDON E.C.



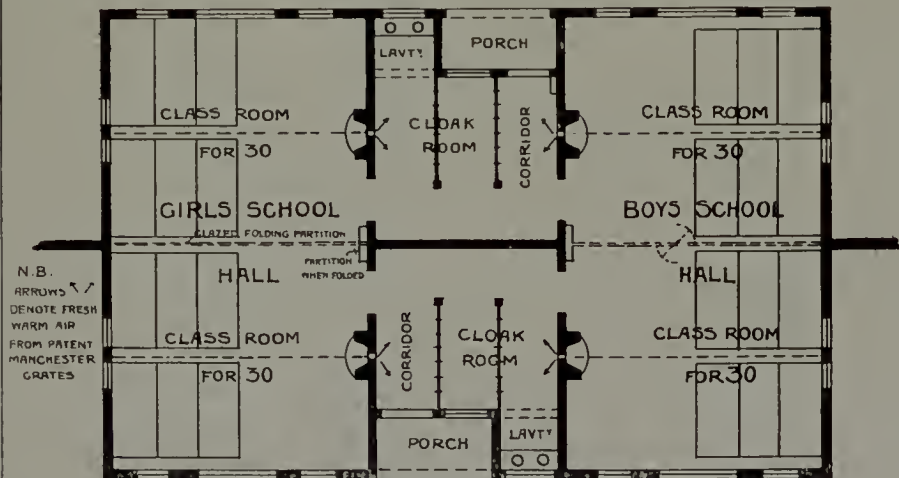
PERSPECTIVE SKETCH



SMALL VILLAGE SCHOOL FOR 120 CHILDREN

N^o 22

BOYS ENTRANCE & PLAY GROUND



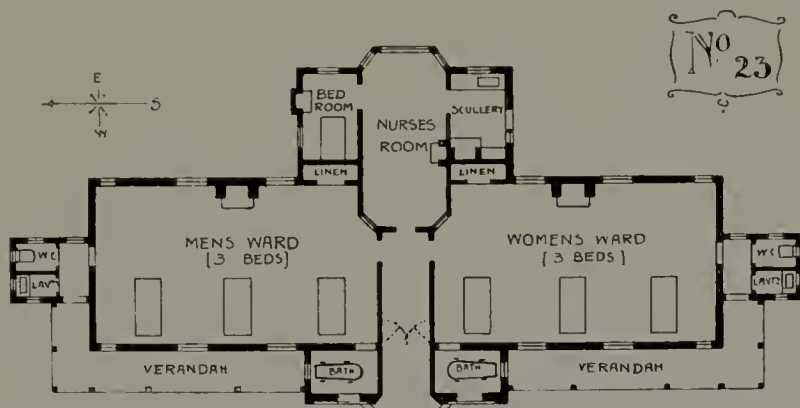
GIRLS & INFANTS ENTRANCE & PLAY GROUND

CONSTRUCTED IN PATENT CONCRETE CONSTRUCTION
RENDERED IN CEMENT OUTSIDE & IN WOOD BLOCK
FLOOR MAJOR'S TILE ROOF COST ABOUT £750

Clow Ross
ARCHT
Architect & Surveyors
CHELMSFORD
& 1 West Street
LONDON E.C.



SMALL · INFECTIOUS · HOSPITAL · FOR 6 BEDS



{ No 23 }

PARTICULARS

PLAN

WALLS · CONSTRUCTED · IN · PATENT · CONCRETE
CONSTRUCTION · RENDERED · OUTSIDE · IN · PORTLAND ·
CEMENT · INSIDE · IN · PARIAN · CEMENT · ALL · ANGLES ·
ROUNDED & NO · MOULDINGS · MAPLE · FLOOR · WAX · POLISHED
TILE · ROOF · COST · ABOUT · £800

Clare Rose
ARCHT.
Architects & Surveyors
CHELMSFORD
& 1 WEST STREET
LONDON E.C.

SKETCH

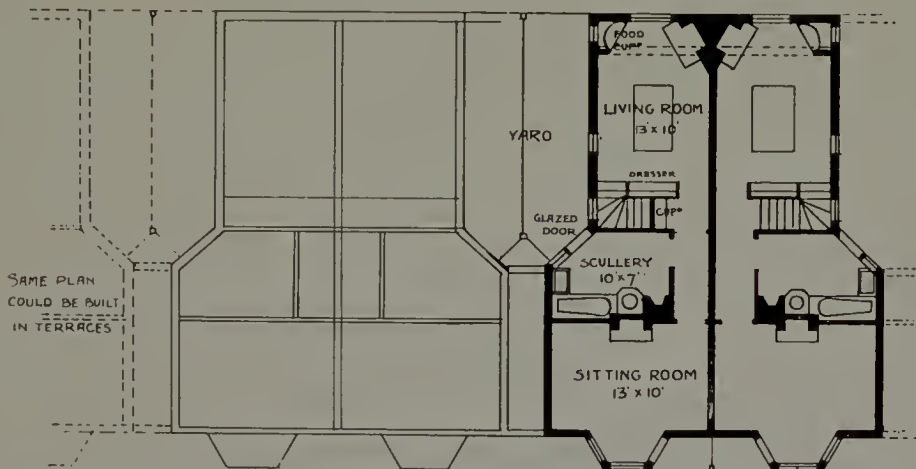


TERRACE OF 4 HOUSES
FOR A CO-OPERATIVE SOCIETY
IN ESSEX - PLANNED ON NEW
& IMPROVED LINES



FIRST FLOOR PLAN

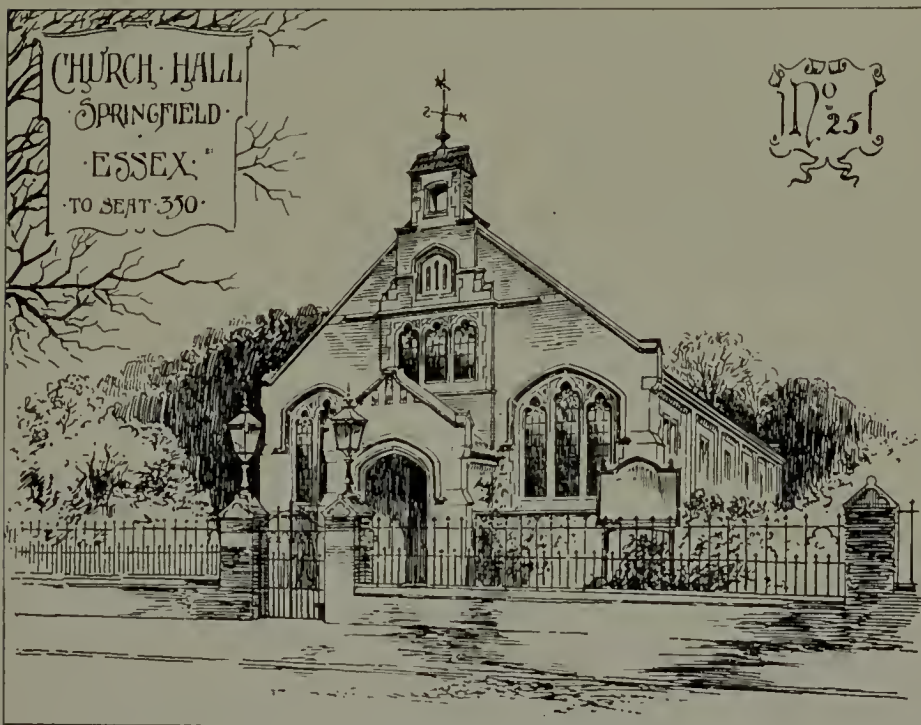
W.C. & COAL HOUSE DETACHED



GROUND PLAN

(Cost: As shewn in brickwork
ABOUT £820 the row of four.
.. in Concrete construction about £720

Clare Ross
Architects & Surveyors
CHELMSFORD
51 WEST STREET
LONDON E.C.



PERSPECTIVE SKETCH



GROUND PLAN

PARTICULARS

Cost: in brickwork & stone as shewn £900

" in patent concrete construction £750

Charles Ross
ARCHT.

Architects & Surveyors
CHELMSFORD
8 / WEST STREET
LONDON E.C.



